

Engineering Interpretations

Building Site Development

Soil properties influence development of building sites, including the selection of the site, the design of the structure, construction, post construction performance, and maintenance. Soil limitation ratings of slight, moderate, and severe are given for shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns, landscaping, and golf fairways.

Shallow Excavations

Shallow excavations are trenches or holes dug in the soil to a maximum depth of 5 or 6 feet. They are used for pipelines, sewer lines, telephone and power transmission lines, basements, open ditches, and cemeteries. The ratings are based on the soil properties that influence ease of digging and resistance to sloughing.

Dwellings With or Without Basements

These are single-family houses of three stories or less. The foundation is assumed to be spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or the depth of maximum frost penetration, whichever is deeper, for houses without basements, or at a depth of 7 feet if a basement is constructed. The ratings are based on properties affecting soil strength and settlement under a load, and those that affect excavation and construction costs.

Small Commercial Buildings

Limitation ratings are given for the undisturbed soil on which small commercial buildings of less than three stories without basements are built. The foundation is assumed to be placed on spread footings of reinforced concrete at a depth of 2 feet or the depth of maximum frost penetration, whichever is deeper.

Local Roads and Streets

Limitation ratings are given for the use of soils for construction of improved local roads and streets that have all-weather surfacing, commonly of asphalt, gravel with binder in it, or concrete, and that are expected to carry automobile traffic all year. These roads and streets are graded to shed water, and conventional drainage measures are provided. With the probable exception of the hard surface, roads and streets are built mainly from the soil at hand.

Lawns, Landscaping, and Golf Fairways

The soils are rated for their use in establishing and maintaining turf for lawns and golf fairways and ornamental trees and shrubs for residential type landscaping. The ratings are based on the use of soil material at the location with some land smoothing. Irrigation may or may not be needed and is not a criterion in rating. Traps, trees, roughs, and greens are not considered as part of the golf fairway. The properties considered are those listed that affect plant growth and trafficability after vegetation is established.

This subsection includes:

- **(a) Building Site Development**

Building Site Development

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
15000: BASEHOR-----	Severe: depth to rock	Severe: depth to rock	Severe: depth to rock	Severe: slope depth to rock	Severe: depth to rock	Severe: depth to rock
15001: BASEHOR-----	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: slope depth to rock	Severe: large stones slope depth to rock
15002: MCGIRK-----	Severe: wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: low strength shrink-swell wetness	Severe: wetness
40000: BARDEN-----	Severe: wetness	Severe: shrink-swell	Severe: shrink-swell wetness	Severe: shrink-swell	Severe: low strength shrink-swell	Slight
40001: BOLIVAR-----	Moderate: depth to rock	Moderate: shrink-swell	Moderate: shrink-swell depth to rock	Moderate: shrink-swell slope	Moderate: low strength shrink-swell	Moderate: depth to rock
40002: LIBERAL-----	Severe: wetness	Severe: shrink-swell	Severe: shrink-swell wetness	Severe: shrink-swell	Severe: low strength shrink-swell	Slight
46000: HUMANSVILLE----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding low strength	Severe: flooding
66000: MONITEAU-----	Severe: wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding wetness	Severe: flooding low strength wetness	Severe: wetness
66001: DAMERON-----	Moderate: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding low strength	Severe: flooding
70000: BONA-----	Moderate: too clayey	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell slope	Severe: low strength	Moderate: large stones small stones droughty

Building Site Development--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
70001: BONA-----	Moderate: slope too clayey	Moderate: slope shrink-swell	Moderate: slope shrink-swell	Moderate: slope shrink-swell	Severe: slope low strength	Moderate: slope large stones small stones droughty
70002: ALSUP-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: large stones small stones
70003: ALSUP-----	Moderate: slope too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell slope	Severe: low strength shrink-swell	Moderate: large stones slope small stones
70004: ALSUP-----	Severe: slope	Severe: slope shrink-swell	Severe: slope shrink-swell	Severe: slope shrink-swell	Severe: slope low strength shrink-swell	Severe: slope
70005: BLUEYE-----	Severe: depth to rock	Severe: shrink-swell	Severe: shrink-swell depth to rock	Severe: shrink-swell slope	Severe: low strength shrink-swell	Moderate: large stones small stones droughty
MOKO-----	Severe: large stones depth to rock	Severe: large stones depth to rock	Severe: large stones depth to rock	Severe: large stones slope depth to rock	Severe: large stones depth to rock	Severe: large stones small stones depth to rock
70006: CRELDON-----	Severe: wetness	Moderate: shrink-swell wetness	Severe: wetness	Moderate: shrink-swell wetness	Severe: low strength	Moderate: wetness
70007: CLIQUT-----	Moderate: slope too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell slope	Severe: low strength shrink-swell	Moderate: slope small stones large stones
70008: GOSS-----	Moderate: too clayey large stones	Moderate: shrink-swell large stones	Moderate: shrink-swell large stones	Moderate: slope shrink-swell large stones	Moderate: shrink-swell	Moderate: droughty small stones
70009: GOSS-----	Moderate: slope too clayey large stones	Moderate: slope shrink-swell large stones	Moderate: slope shrink-swell large stones	Severe: slope	Moderate: slope shrink-swell	Moderate: droughty slope small stones large stones

Building Site Development--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
70010: GOSS-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: large stones slope small stones
70011: GOSS-----	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: slope	Severe: large stones slope
MOKO-----	Severe: large stones depth to rock slope	Severe: large stones depth to rock slope	Severe: large stones depth to rock slope	Severe: large stones slope depth to rock	Severe: large stones depth to rock slope	Severe: large stones small stones depth to rock slope
70012: HOBERG-----	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: frost action wetness	Moderate: wetness droughty
70013: MOKO-----	Severe: large stones depth to rock	Severe: large stones depth to rock	Severe: large stones depth to rock	Severe: large stones slope depth to rock	Severe: large stones depth to rock	Severe: large stones small stones depth to rock
70014: MOKO-----	Severe: large stones depth to rock slope	Severe: large stones depth to rock slope	Severe: large stones depth to rock slope	Severe: large stones slope depth to rock	Severe: large stones depth to rock slope	Severe: large stones small stones depth to rock slope
ROCK OUTCROP.						
70015: PEMBROKE-----	Moderate: too clayey	Slight	Slight	Slight	Severe: frost action low strength	Slight
70016: GOODSON-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Slight
70017: GOODSON-----	Moderate: too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: small stones
70018: GOODSON-----	Moderate: slope too clayey wetness	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell	Severe: low strength shrink-swell	Moderate: slope small stones

Building Site Development--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
70039: SACVILLE-----	Severe: wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: low strength shrink-swell wetness	Severe: wetness
73000: POMME-----	Moderate: too clayey	Slight	Slight	Moderate: slope	Slight	Slight
73001: GLENSTED-----	Severe: wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: low strength shrink-swell wetness	Severe: wetness
73002: OCIE-----	Moderate: slope too clayey depth to rock	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell slope	Severe: low strength shrink-swell	Moderate: slope small stones
GATEWOOD-----	Severe: depth to rock wetness	Severe: shrink-swell	Severe: shrink-swell wetness depth to rock	Severe: shrink-swell slope	Severe: low strength shrink-swell	Moderate: large stones small stones wetness
73003: OCIE-----	Severe: slope	Severe: slope shrink-swell	Severe: slope shrink-swell	Severe: slope shrink-swell	Severe: slope low strength shrink-swell	Severe: slope
GATEWOOD-----	Severe: slope depth to rock wetness	Severe: slope shrink-swell	Severe: slope depth to rock shrink-swell wetness	Severe: slope shrink-swell	Severe: slope low strength shrink-swell	Severe: slope
73004: OCIE-----	Severe: slope	Severe: slope shrink-swell	Severe: slope shrink-swell	Severe: slope shrink-swell	Severe: slope low strength shrink-swell	Severe: slope small stones
73005: OCIE-----	Moderate: slope too clayey depth to rock	Severe: shrink-swell	Severe: shrink-swell	Severe: shrink-swell slope	Severe: low strength shrink-swell	Moderate: slope small stones
73006: PERIDGE-----	Slight	Moderate: shrink-swell	Moderate: shrink-swell	Moderate: shrink-swell	Severe: low strength	Slight
73007: PLATO-----	Severe: wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: shrink-swell wetness	Severe: low strength shrink-swell	Moderate: wetness droughty

Building Site Development--Continued

Map symbol and soil name	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
73008: VIRATON-----	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: wetness	Moderate: frost action wetness	Moderate: wetness droughty
73009: VIRATON-----	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: slope wetness frost action	Moderate: wetness droughty
73010: WILDERNESS-----	Severe: wetness	Moderate: wetness	Severe: wetness	Moderate: slope wetness	Moderate: frost action wetness	Severe: small stones droughty
74625: HARTVILLE-----	Severe: wetness	Severe: shrink-swell	Severe: shrink-swell wetness	Severe: shrink-swell	Severe: frost action low strength shrink-swell	Moderate: wetness
75375: HORSECREEK-----	Moderate: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding low strength	Moderate: flooding
75376: CEDARGAP-----	Moderate: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding
75377: RACKET-----	Severe: cutbanks cave	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding
75378: STURKIE-----	Moderate: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding	Severe: flooding
99000. PITS, QUARRIES						
99001. WATER						
99003. MISCELLANEOUS WATER						